

Fig. 1

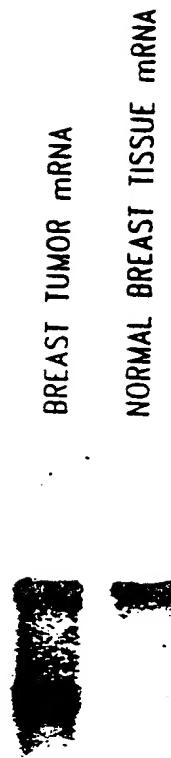


Fig. 2

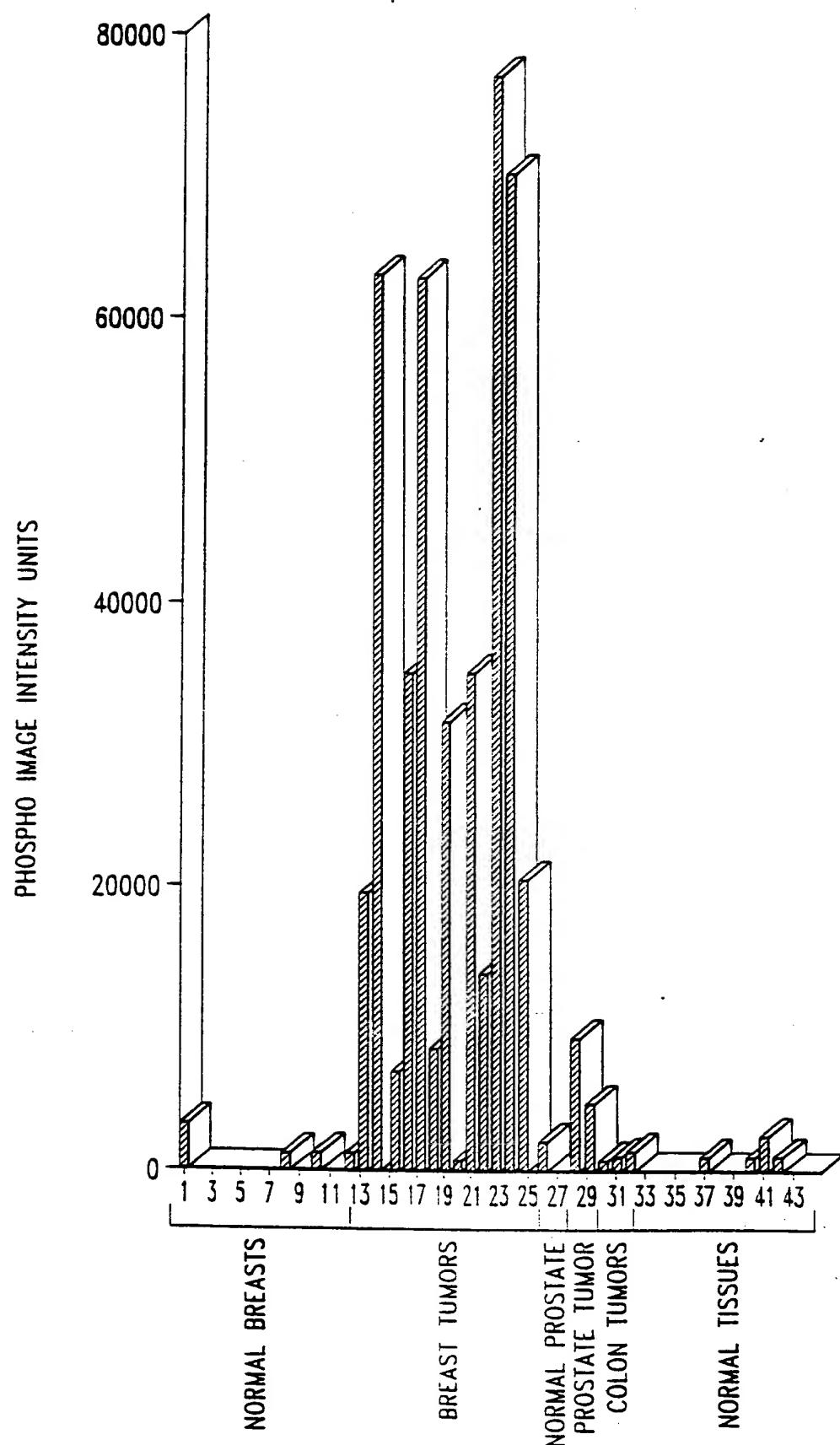


Fig. 3

GENOMIC CLONE MAP

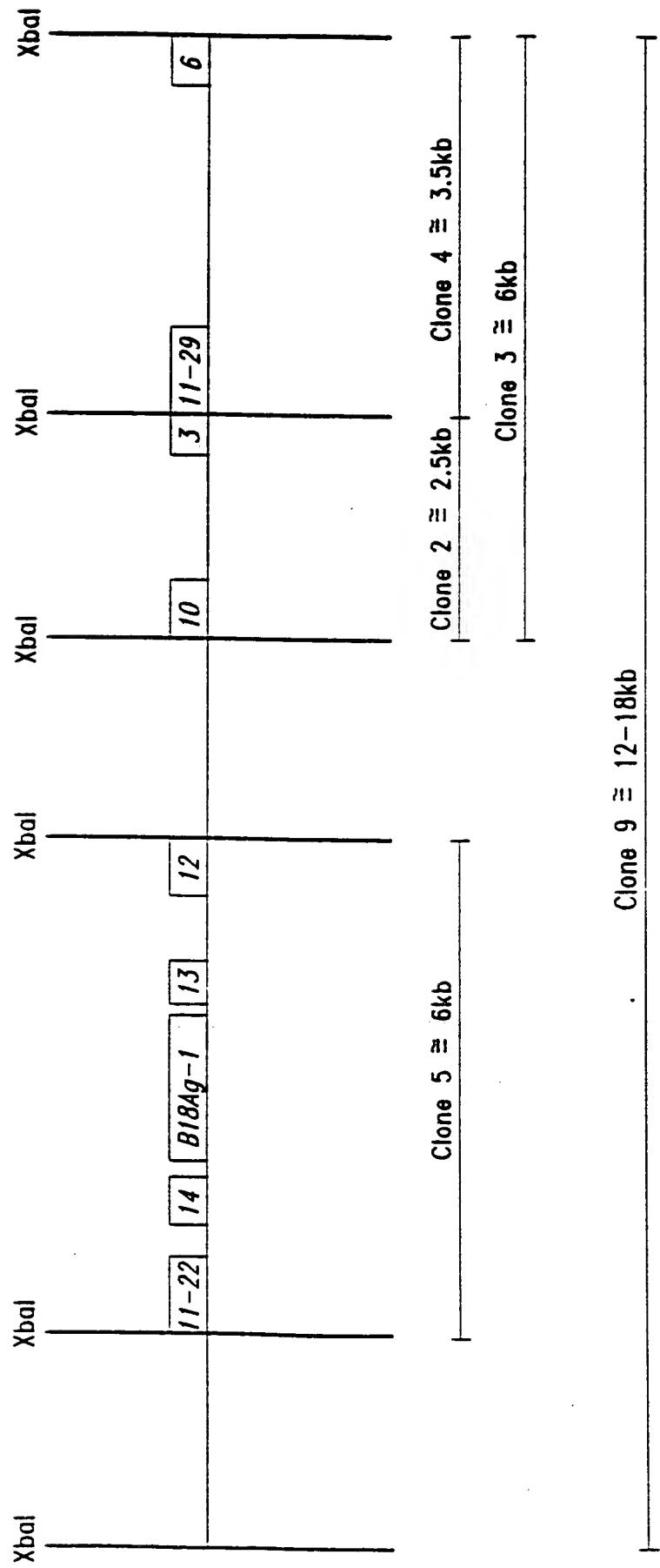


Fig. 4

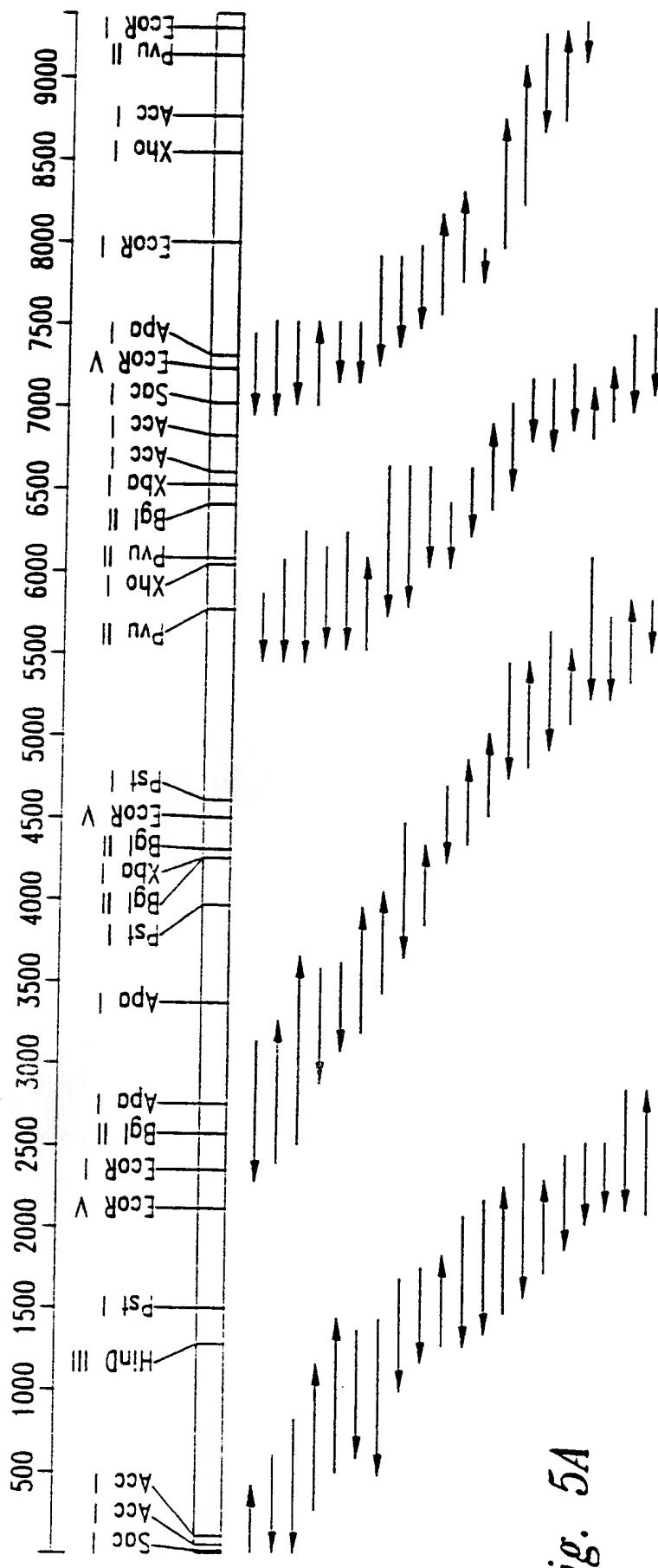


Fig. 54

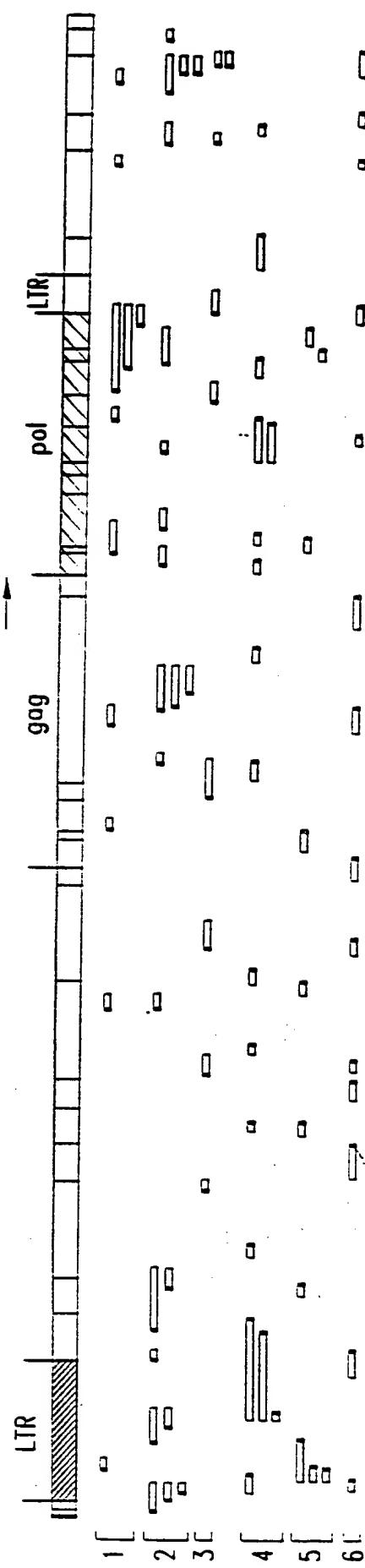


Fig. 5B

NUCLEOTIDE SEQUENCE OF THE REPRESENTATIVE
BREAST-TUMOR SPECIFIC cDNA B18Ag1

TTA GAG ACC CAA TTG GGA CCT AAT TGG GAC CCA AAT TTC TCA AGT GGA	48
Leu Glu Thr Gln Leu Gly Pro Asn Trp Asp Pro Asn Phe Ser Ser Gly	
1 5 10 15	
GGG AGA ACT TTT GAC GAT TTC CAC CGG TAT CTC CTC GTG GGT ATT CAG	96
Gly Arg Thr Phe Asp Asp Phe His Arg Tyr Leu Leu Val Gly Ile Gln	
20 25 30	
GGA GCT GCC CAG AAA CCT ATA AAC TTG TCT AAG GCG ATT GAA GTC GTC	144
Gly Ala Ala Gln Lys Pro Ile Asn Leu Ser Lys Ala Ile Glu Val Val	
35 40 45	
CAG GGG CAT GAT GAG TCA CCA GGA GTG TTT TTA GAG CAC CTC CAG GAG	192
Gln Gly His Asp Glu Ser Pro Gly Val Phe Leu Glu His Leu Gln Glu	
50 55 60	
GCT TAT CGG ATT TAC ACC CCT TTT GAC CTG GCA GCC CCC GAA AAT AGC	240
Ala Tyr Arg Ile Tyr Thr Pro Phe Asp Leu Ala Ala Pro Glu Asn Ser	
65 70 75 80	
CAT GCT CTT AAT TTG GCA TTT GTG GCT CAG GCA GCC CCA GAT AGT AAA	288
His Ala Leu Asn Leu Ala Phe Val Ala Gln Ala Ala Pro Asp Ser Lys	
85 90 95	
AGG AAA CTC CAA AAA CTA GAG GGA TTT TGC TGG AAT GAA TAC CAG TCA	336
Arg Lys Leu Gln Lys Leu Glu Gly Phe Cys Trp Asn Glu Tyr Gln Ser	
100 105 110	
GCT TTT AGA GAT AGC CTA AAA GGT TTT	363
Ala Phe Arg Asp Ser Leu Lys Gly Phe	
115 120	

DRAFT - 06/20/90

Fig. 6

NUCLEOTIDE SEQUENCE OF THE REPRESENTATIVE
BREAST-TUMOR SPECIFIC cDNA B17Ag1

GC TGGGCACAGT GGCTCATACC TGTAAATCCTG ACCGTTTCAG AGGCTCAGGT	60
CG CTTGAGCCCA AGATTCAAG ACTAGTCTGG GTAACATAGT GAGACCCJAT	120
AA AAATAAAAAAA ATGAGCCTGG TGTAGTGGCA CACACCAGCT GAGGAGGGAG	180
CT AGGAGA	196

Fig. 7

NUCLEOTIDE SEQUENCE OF THE REPRESENTATIVE BREAST-TUMOR SPECIFIC cDNA B17Ag2

GC TTGGGGGCTC TGACTAGAAA TTCAAGGAAC CTGGGATTCA AGTCCAAC TG	60
AC TTACACTGTG GNCTCCAATA AACTGCTTCT TTCCATTCC CTCTCTATT A	120
AA GGAAAACGAT GTCTGTGTAT AGCCAAGTCA GNTATCCTAA AAGGAGATA C	180
AT TAAATATCAG AATGTAAAAC CTGGGAACCA GGTTCCCAGC CTGGGATTAA	240
CA AGAAGACTGA ACAGTACTAC TGTGAAAAGC CCGAAGNGGC AATATGTTCA	300
TT GAAGGATGGC TGGGAGAATG AATGCTCTGT CCCCCAGTCC CAAGCTCACT	360
CT CCTTTATAGC CTAGGGAGA	388

Fig. 8

NUCLEOTIDE SEQUENCE OF THE REPRESENTATIVE
BREAST-TUMOR SPECIFIC cDNA B13Ag2a

GC CTATAATCAT GTTTCTCATT ATTTTCACAT TTTATTAACC AATTCTGTT	60
AA AATATGAGGG AAATATATGA AACAGGGAGG CAATGTTCA G ATAATTGATC	120
TG ATTTCTACAT CAGATGCTCT TTCCCTTCCT GTTTATTTCC TTTTTATTTC	180
GG TCGAATGTAA TAGCTTGTT TCAAGAGAGA GTTTGGCAG TTTCTGTAGC	240
CT GCTCATGTCT CCAGGCATCT ATTTGCACTT TAGGAGGTGT CGTGGGAGAC	300
CT ATTTTTCCA TATTTGGGCA ACTACTA	337

Fig. 9

NUCLEOTIDE SEQUENCE OF THE REPRESENTATIVE
BREAST-TUMOR SPECIFIC cDNA B13Ag1b

GC CATAAGTGC CTTCCATT ATTAAACCCC CACCTGAACG GCATAAACTG	60
GC TGGTGTCCCC TACTGTAAAC AATAAGGAGA CTTGCTCTT CATTAAACC	120
AT TTCATATTTT ACGCTCGAGG GTTTTACCG GTTCCTTTT ACACTCCTA	180
TT TAAGTCGTTT GGAACAAGAT ATTTTTCTT TCCTGGCAGC TTTAACATT	240
TT TGTGTCTGGG GGACTGCTGC TCACTGTTTC TCAAGTGC AAATCAAGGC	300
CC AAGAAAAAAA AATTTTTTG TTTTATTGA AACTGGACCG GATAAACGGT	360
CG GCTGCTGTAT ATAGTTTAA ATGGTTTATT GCACCTCCTT AAGTTGCACT	420
GG GGGGNTTTG NATAGAAAGT NTTTANTCAC ANAGTCACAG GGACTTTNT	480
NA CTGAGCTAAA AAGGGCTGNT TTTGGGTGG GGGCAGATGA AGGCTCACAG	540
TC TCTTAGAGGG GGGAACTNCT A	571

Fig. 10

NUCLEOTIDE SEQUENCE OF THE REPRESENTATIVE
BREAST-TUMOR SPECIFIC cDNA B13Ag1a

TA ATAACTTAAA TATATTTGA TCACCCACTG GGGTGATAAG ACAATAGATA	60
TT TCCAAAAAGC ATAAAACCAA AGTATCATAC CAAACCAAAT TCATACTGCT	120
CC GCACTGAAAC TTCACCTTCT AACTGTCTAC CTAACCAAAT TCTACCCCTTC	180
GG TGC GTGCTCA CTACTCTTTT TTTTTTTTT TTTNTTTGG AGATGGAGTC	240
CA GCCCAGGGT GGAGTACAAT GGCACAAACCT CAGCTCACTG NAACCTCCGC	300
TT CATGAGATTG TCCTGNTTCA GCCTTCCCAG TAGCTGGGAC TACAGGTGTG	360
TG CCTGGNTAAT CTTTTTNGT TTTNGGGTAG AGATGGGGT TTTACATGTT	420
TG GTNTCGAACT CCTGACCTCA AGTGATCCAC CCACCTCAGG CTCCCAAAGT	480
TA CAGACATGAG CCACTGNGCC CAGNCCTGGT GCATGCTCAC TTCTCTAGGC	540
	548

Fig. 11

NUCLEOTIDE SEQUENCE OF THE REPRESENTATIVE
BREAST-TUMOR SPECIFIC cDNA B11Ag1

TG CACATGCAGA ATATTCTATC GGTACTTCAG CTATTACTCA TTTTGATGGC	60
AG CCTATCCTCA AGATGAGTAT TTAGAAAGAA TTGATTTAGC GATAGACCAA	120
GC ACTCTGACTA CACGAAATTG TTCAGATGTG ATGGATTTAT GACAGTTGAT	180
GA GATTATTAAG TGATTATTT AAAGGGAATC CATTAAATTCC AGAATATCTT	240
TC AAGATGATAT AGAAATAGAA CAGAAAGAGA CTACAAATGA AGATGTATCA	300
TA TTGAAGAGGCC TATAGTAGAA AATGAATTAG CTGCATTTAT TAGCCTTACA	360
TT TTCCTGATGA ATCTTATATT CAGCCATCGA CATAGCATTAA CCTGATGGGC	420
GA ATAATAGAAA CTGGGTGCGG GGCTATTGAT GAATTCAATCC NCAGTAAATT	480
AC AAAATATAAC TCGATTGCAT TTGGATGATG GAATACTAAA TCTGGCAAAA	540
GG AGCTACTAGT AACCTCTCTT TTTGAGATGC AAAATTTCT TT-TAGGGTTT	600
CT ACTTTACGGA TATTGGAGCA TAACGGGA	638

Fig. 12

NUCLEOTIDE SEQUENCE OF THE REPRESENTATIVE
BREAST-TUMOR SPECIFIC cDNA B3CA3c

ACTGATGGAT GTGCCGGAG GCGAGGGGCC TTATCTGATG CTCGGCTGCC TGTTCGTGAT 60
GTGCGCGGCG ATTGGGCTGT TTATCTAAA CACCGCCACG GCGGTGCTGA TGGCGCTAT 120
TGCCTTAGCG GCGGCGAAGT CAATGGCGT CTCACCCCTAT CCTTTGCCA TGGTGGTGGC 180
GATGGCGGCT TCGGCGGCGT TTATGACCCC GGTCTCCTCG CCGGTTAACCA CCCTGGTGCT 240
TGGCCCTGGC AAGTACTCAT TTAGGGATTT TGTAAAATA GGC GTG 286

Fig. 13

NUCLEOTIDE SEQUENCE OF THE REPRESENTATIVE BREAST-TUMOR SPECIFIC cDNA B9CG1

AG CAGCCCCCTTC TTCTCAATT CATCTGTCAC TACCCCTGGTG TAGTATCTCA	60
CA TTTTTATAGC CTCCCTCCCTG GTCTGTCTTT TGATTTCTT GCCTGTAATC	120
AC ATAAC TGCAA GTAAACATT CTAAAGTGTG GTTATGCTCA TGTCACTCCT	180
AA ATAGTTCCA TTACCGTCTT AATAAAATTC GGATTTGTTTC TTTNCTATTN	240
CA CCTATGACCG AA	262

Fig. 14

NUCLEOTIDE SEQUENCE OF THE REPRESENTATIVE
BREAST-TUMOR SPECIFIC cDNA B9CG3

AG CAAAGCCAGT GGTTTGAGCT CTCTACTGTG TAAACTCCTA AACCAAGGCC	60
TA AATGGTGGCA GGATTTTAT TATAAACATG TACCCATGCA AATTCCTAT	120
GA TATATTCTTC TACATTAAA CAATAAAAAT AATCTATTT TAAAAGCCTA	180
AG TTAGGTAAGA GTGTTAATG AGAGGGTATA AGGTATAAAAT CACCAGTCAA	240
TG CCTATGACCG A	261

Fig. 15

NUCLEOTIDE SEQUENCE OF THE REPRESENTATIVE
BREAST-TUMOR SPECIFIC cDNA B2CA2

GG GCATGGACGC AGACGCCTGA CGTTGGCTG AAAATCTTC ATTGATTG	60
AT AGGAAAATTC CCAAAGAGGG AATGTCCGT TGCTGCCAG TTTTNTGTT	120
GG ANAAGGCAAN GAGCTCTTCA GACTATTGGN ATTNTCGTTC GGTCTTCTGC	180
CG NCTTGCNANG ATCTTCAT	208

Fig. 16

NUCLEOTIDE SEQUENCE OF THE REPRESENTATIVE
BREAST-TUMOR SPECIFIC cDNA B3CA1

GG GCATGGACGC AGACGCCCTGA CGTTTGGCTG AAAATCTTTC ATTGATTCGT 60
AT AGGAAAATTC CCAAAGAGGG AATGTCCGT TGCTGCCAG TTTTTNTGTT 120
GG ANAAGGCAAN GAGCTCTTCA GACTATTGGN ATTNTCGTTC GGTCTTCTGC 180
CG NCTTGCNANG ATCTTCAT 208

Fig. 17

NUCLEOTIDE SEQUENCE OF THE REPRESENTATIVE BREAST-TUMOR SPECIFIC cDNA B3CA2

GG GCATGGACGC AGACGCCTGA CGTTGGCTG AAAATCTTC ATTGATTG 60
AT AGGAAAATTC CCAAAGAGGG AATGTCTGT TGCTGCCAG TTTTNTGTT 120
GG ANAAGGCAAN GAGCTCTTCA GACTATTGGN ATTNTCGTTC GGTCTTCTGC 180
CG NCTTGCNANG ATCTTCAT 208

Fig. 18

NUCLEOTIDE SEQUENCE OF THE REPRESENTATIVE
BREAST-TUMOR SPECIFIC cDNA B3CA3

AG GGAGCAAGGA	GAAGGCATGG	AGAGGCTCAN	GCTGGTCCTG	GCCTACGACT	60
CT GTCGCCGGGG	ATGGTGGAGA	ACTGAAGCGG	GACCTCCTCG	AGGTCCCTCCG	120
TC NCCGTCCAGG	AGGAGGGTCT	TTCCGTGGTC	TNGGAGGAGC	GGGGGGAGAA	180
TC ATGGTCNACA	TCCC				204

Fig. 19

NUCLEOTIDE SEQUENCE OF THE REPRESENTATIVE
BREAST-TUMOR SPECIFIC cDNA B4CA1

TC AGGAGCGGGT AGAGTGGCAC CATTGAGGGG ATATTCAAAA ATATTATTT	60
TG ATAGTTGCTG AGTTTTCTT TGACCCATGA GTTATATTGG AGTTTATTTT	120
CC AATCGCATGG ACATGTTAGA CTTATTTCT GTTAATGATT NCTATTTTA	180
GA TTTGAGAAAT TGGTTNTTAT TATATCAATT TTTGGTATT GTTGAGTTG	240
GC TTAGTATGTG ACCA	264

Fig. 20

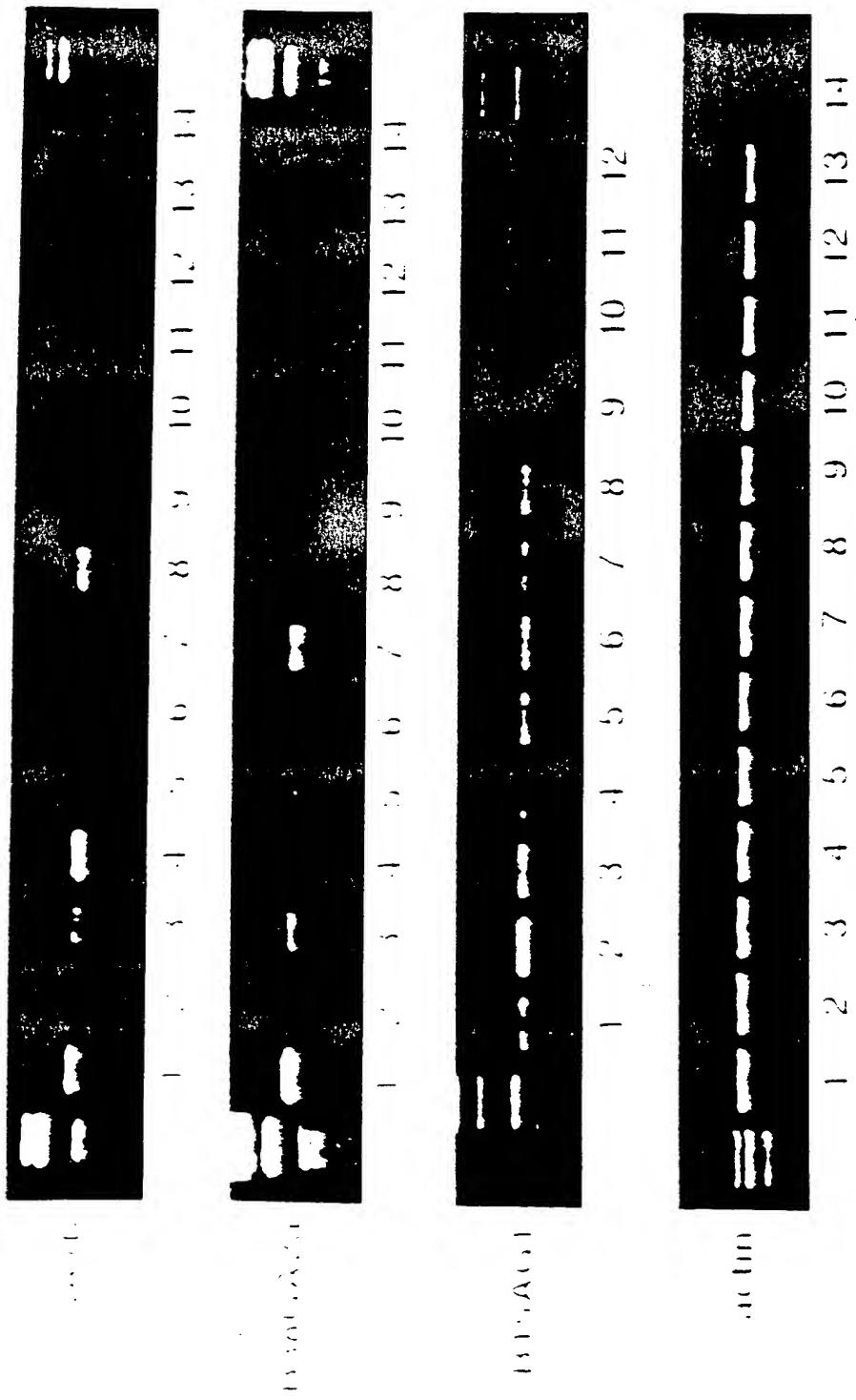


Fig. 21A

B31(i,A11)



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

B30(i,A11)



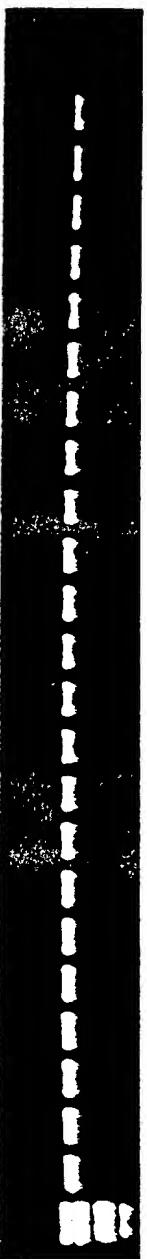
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

B15(A11)



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

B-action



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

Fig. 21B

Recognition of Peptide by D142 anti-B11-8
CTL line

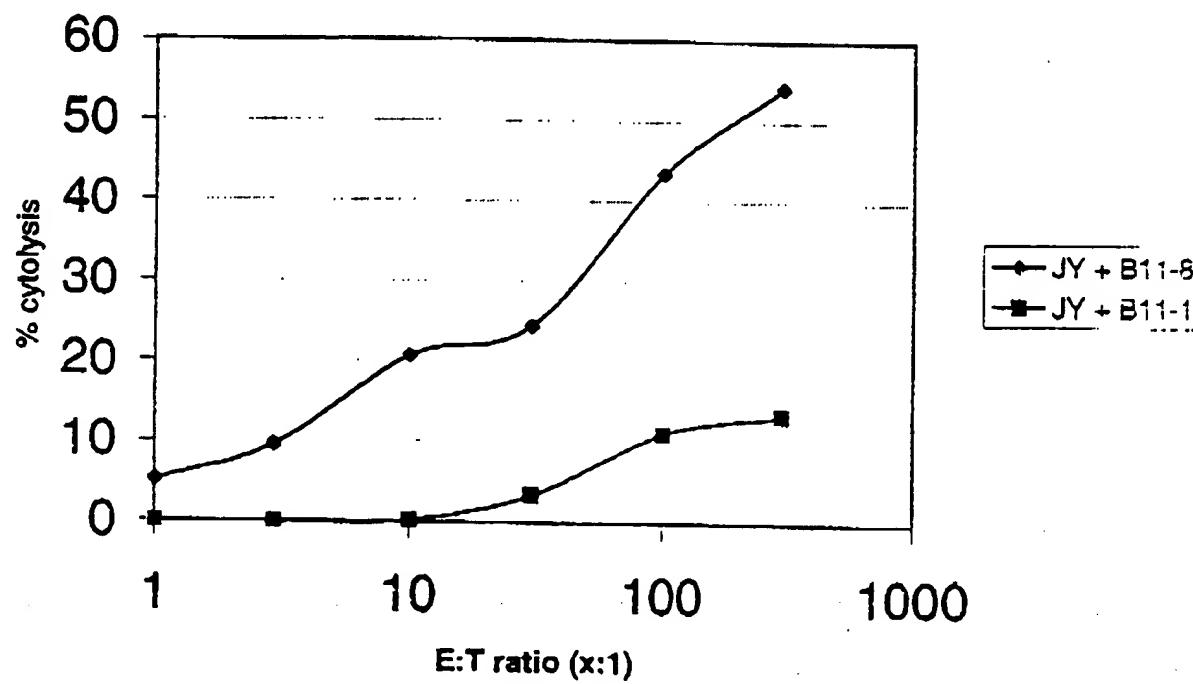


Fig. 22

Recognition of B11 Transductant by B11-8 Specific Clone A1

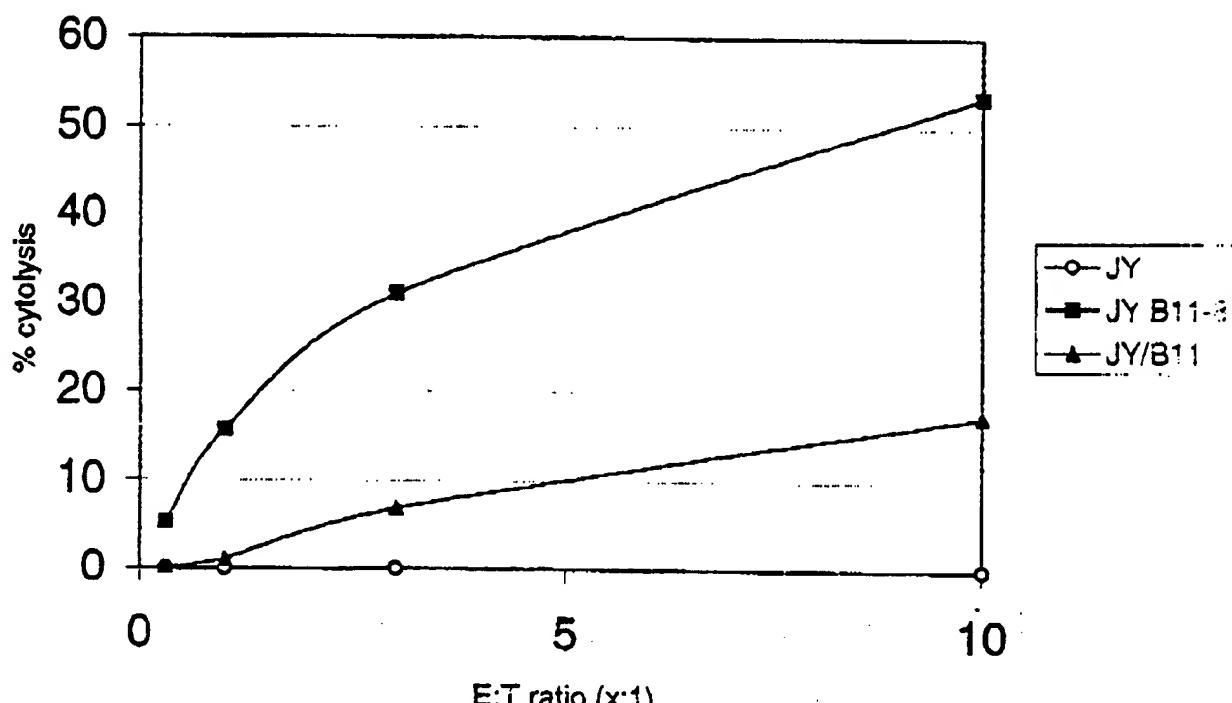


Fig. 23

Recognition of Tumor Cell Lines by Clone A1

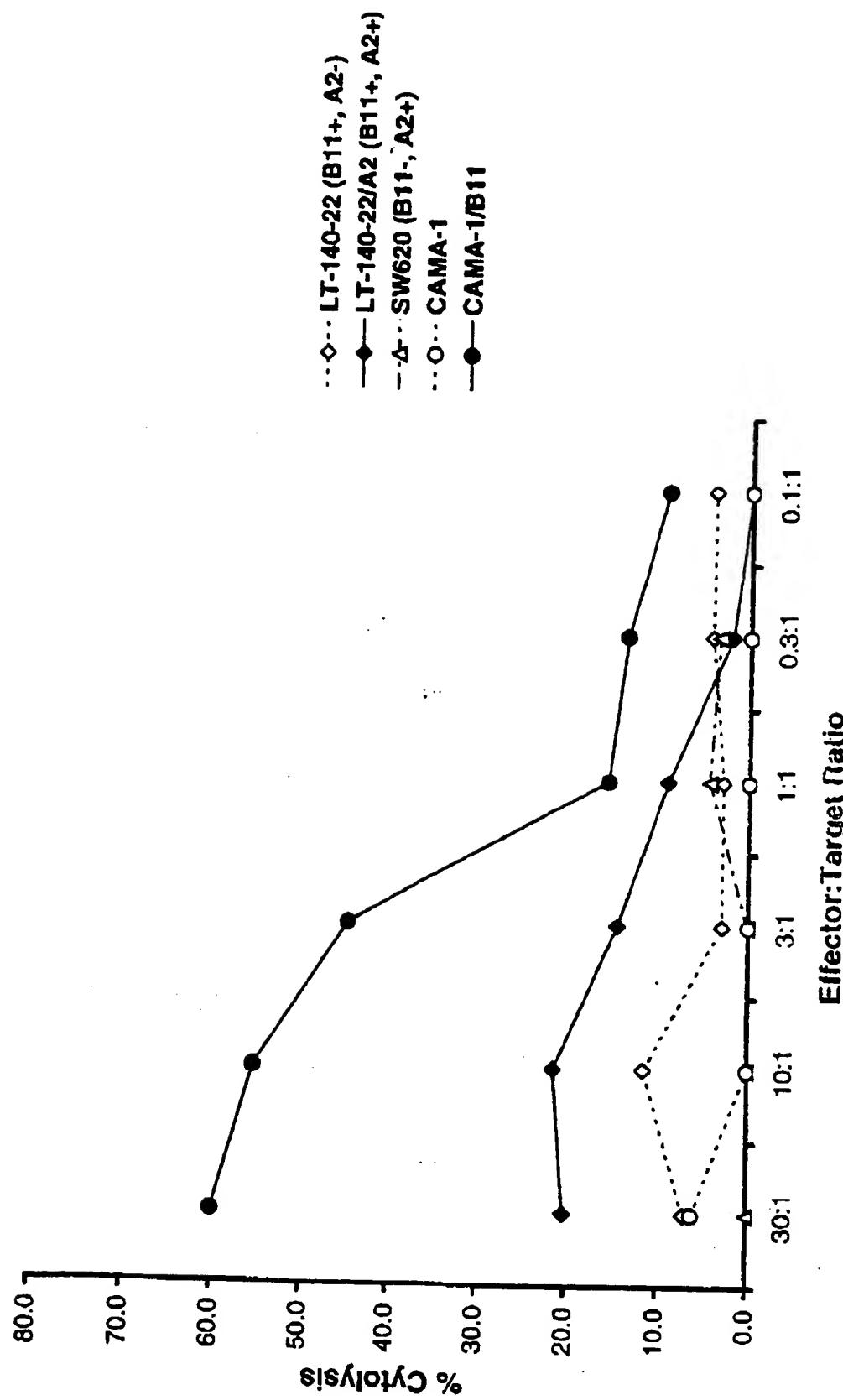


Fig. 24